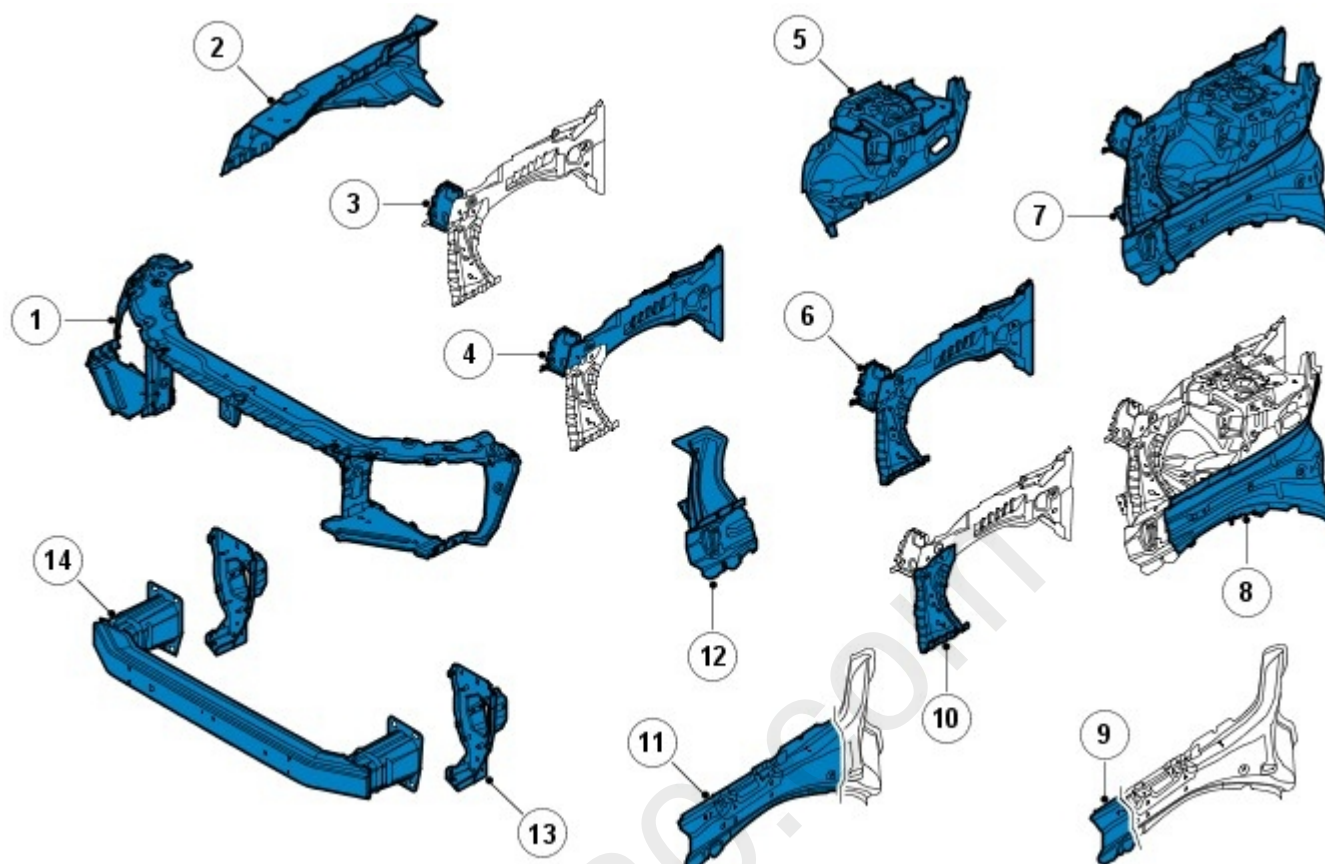


Front End Sheet Metal Repairs - Front End Sheet Metal

Description and Operation

Front end service panels



E87572

Item	Description
1	Hood latch panel
2	Fender apron upper panel
3	Fender apron panel front extension
4	Fender apron panel reinforcement
5	Suspension top mount
6	Fender apron panel
7	Front side member and suspension top mount assembly
8	Front side member closing panel
9	Front side member section
10	Fender apron lower panel
11	Front side member
12	Fender apron panel front reinforcement
13	Front bumper mounting
14	Front bumper

Time schedules, front end

The following schedules show the total time taken to replace single panels and also combinations of panels. The published times include the removal of Mechanical, Electrical and Trim, (MET), items, plus paint times based on Metallic Clear Over Base Paint, (blends to adjacent panels are not included). A corrosion protection time is included where appropriate.

The times were generated by Thatcham, (the Motor Insurance Repair Research Centre), and are to be used as a guide only, based on new undamaged panels. Job allowances are not included, as a guide Thatcham recommend 0.3 hours to be added to single panel times and 0.5 hours to be added to combination times.

Single panel times

Panel Description	Times
Hood	5.6
Front bumper cover	5.5
Front fender	5.5
Hood latch panel	6.2
Engine and Suspension assembly remove and install	8.5
Instrument panel remove and install	6.2

Combination panel replacement times

Combination panel times

Panel Description	Times
Hood	
Front bumper cover	
Front bumper	
Hood latch panel	
Front fender	
Fender mounting bracket, (front)	
Total Time	L/H 16.5 R/H 16.5

Combination panel times

Panel Description	Times
Hood	
Front bumper cover	
Front bumper	
Hood latch panel	
Front fender L/H and R/H	
Front fender mounting bracket, (front) L/H and R/H	
Total Time	17.2

Combination panel times

Panel Description	Times
Hood	
Front bumper cover	
Front bumper	
Hood latch panel	
Front fender	
Front fender mounting bracket, (front)	
Front bumper mounting	
Front side member	
Front side member and suspension top mount assembly	
Fender apron upper panel	
Engine and suspension assembly remove and install	
Instrument panel remove and install	
Total Time	L/H 42.2 R/H 43.6

Combination panel times

Panel Description	Times
Hood	
Front bumper cover	
Front bumper	
Hood latch panel	
Front fender L/H and R/H	
Front fender mounting bracket, (front) L/H and R/H	
Front bumper mounting L/H and R/H	
Front side member L/H and R/H	
Front side member and suspension top mount assembly L/H and R/H	
Fender apron upper panel L/H and R/H	
Engine and suspension assembly remove and install	
Instrument panel remove and install	
Total Time	57.6

Combination panel times

Panel Description	Times
Hood	
Front bumper cover	
Front bumper	
Hood latch panel	
Front fender	
Front fender mounting bracket, (front)	
Front bumper mounting	
Front side member section	
Fender apron lower panel	
Fender apron panel front reinforcement	
Engine and suspension assembly remove and install	
Total Time	L/H 29.9 R/H 30.0

Front End Sheet Metal Repairs - Front Bumper Mounting

Removal and Installation

Removal

- NOTE: The front bumper mounting is serviced as a separate weld-on panel.
- NOTE: Due to the combined thickness of the panels, it is recommended that spot welds are replaced with MIG plug welds in this repair.

1. The front bumper mounting is replaced in conjunction with:

- Front bumper cover
- Front bumper
- Hood latch panel
- Both front fenders

2. For additional information relating to this repair procedure please see the following:

For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the hood latch panel.

For additional information, refer to: Hood Latch Panel (501-27, Removal and Installation).

4. Remove the radiator cooling pack.

For additional information, refer to: [Radiator](#) (303-03A Engine Cooling - I6 3.2L Petrol, Removal and Installation).

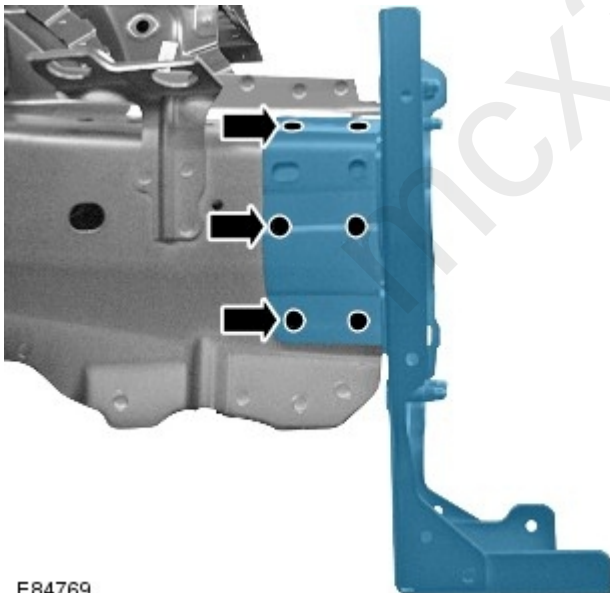
5. LH Side: Remove the air intake pipe.

6. RH Side: Remove the windshield washer reservoir.

For additional information, refer to: [Windshield Washer Reservoir](#) (501-16 Wipers and Washers, Removal and Installation).

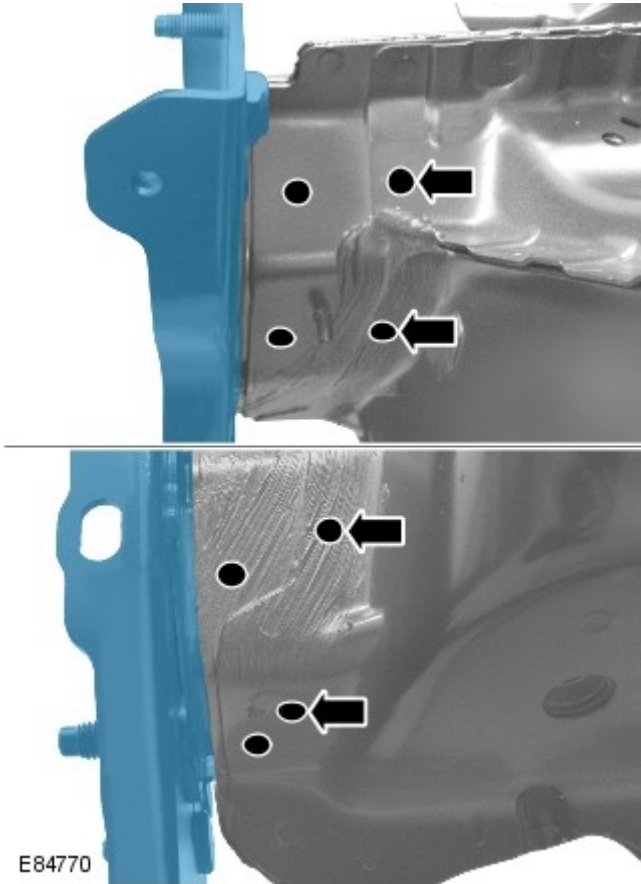
7. Release and lay aside the wiring harness.

8. Mill out the spot welds.



E84769

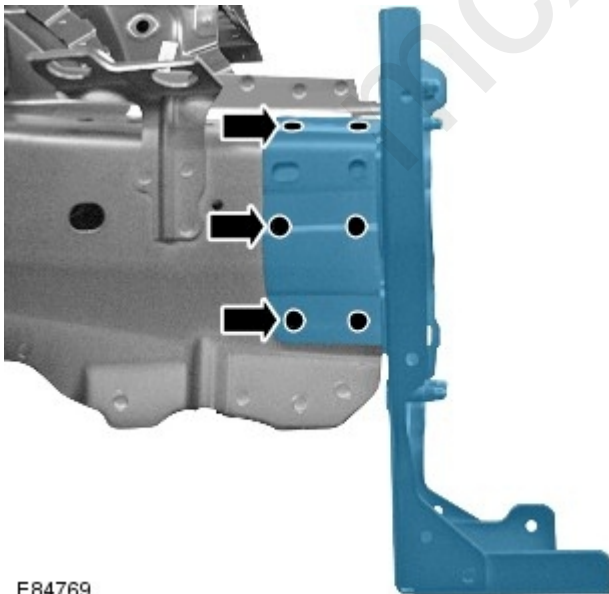
9. Mill out the spot welds.



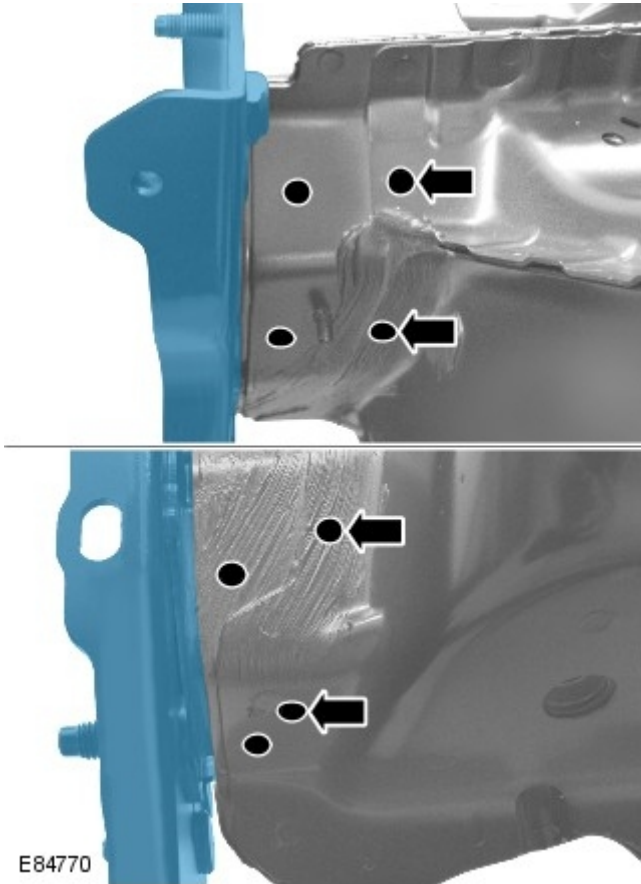
10. Separate the joints and remove the panel.

Installation

1. Prepare the old and new panel joint surfaces.
2. Drill holes in the new panel ready for plug welding.
3. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.
4. Plug weld to the front side member.



5. Plug weld to the front side member closing panel.



6. Dress all welded joints.

7. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Front Side Member and Suspension Top Mount Assembly

Removal and Installation

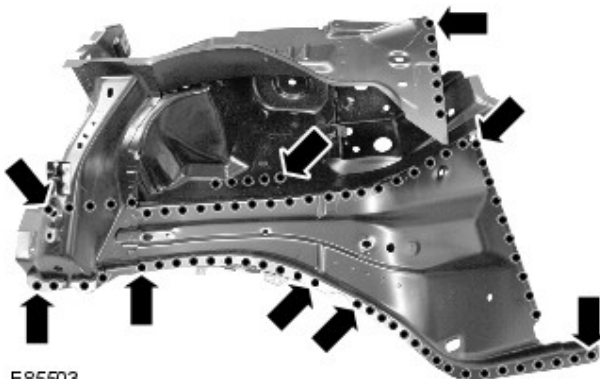
Removal

• NOTE: The front side member and suspension top mount assembly is an assembly of the front side member closing panel, fender apron panel reinforcement, fender apron panel front extension, fender apron lower panel, front side member and fender apron panel and the suspension top mount.

• NOTE: The service panel is not fully welded.

• NOTE: The panel is serviced less its weld studs

1. The front side member and suspension top mount assembly is replaced in conjunction with:
 - Front bumper cover
 - Front bumper armature
 - Hood latch panel
 - Both front fenders
 - Front bumper mounting
 - Fender apron upper panel
 - Front side member
2. For additional information relating to this repair procedure please see the following:
For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).
3. Remove the front side member.
For additional information, refer to: [Front Side Member](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).
4. Remove the fender apron upper panel.
For additional information, refer to: [Fender Apron Upper Panel](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).
5. Remove the instrument panel.
For additional information, refer to: [Instrument Panel - TD4 2.2L Diesel](#) (501-12 Instrument Panel and Console, Removal and Installation).
6. Remove the rocker panel inner trim.
7. Remove the B-pillar lower trim.
For additional information, refer to: [B-Pillar Lower Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).
8. Release and lay aside the front carpet section.
9. Release and lay aside the insulating material at the outer bulkhead.
10. LH Side: Remove the hood release handle.
11. RH Side: Remove the brake booster.
For additional information, refer to: [Brake Booster](#) (206-07 Power Brake Actuation, Removal and Installation).
12. RH Side: Remove the pedal box.
13. Release and lay aside the wiring harnesses at the a-pillar, bulkhead and side member.
14. Mill out the spot welds.

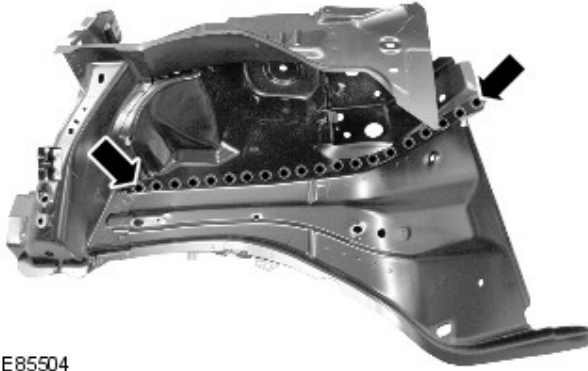


E85503

15. Separate the joints and remove the old panel.

Installation

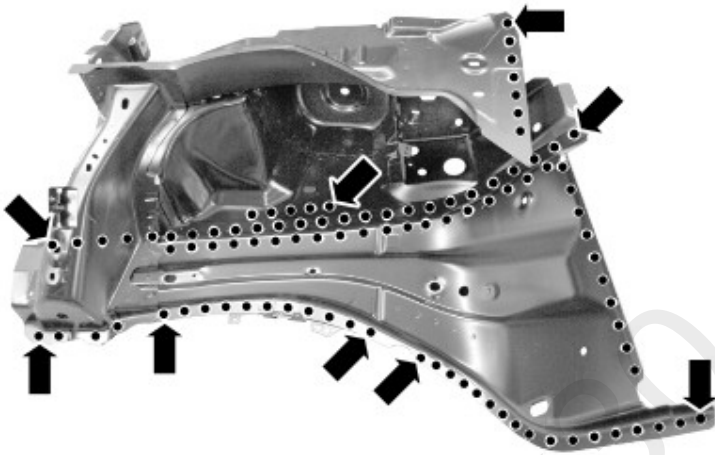
1. Prepare the new panel in the areas where it is not fully welded and MIG plug weld these areas.



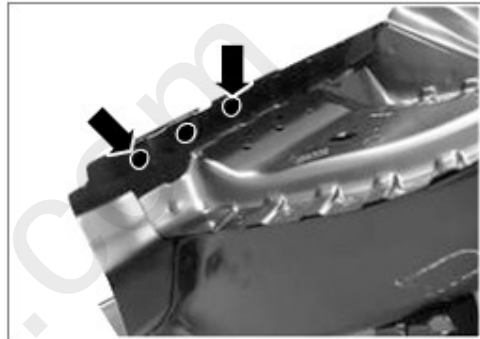
E85504

2. Prepare the old and new panel joint surfaces.

3. Drill holes in the new panel ready for MIG plug welding

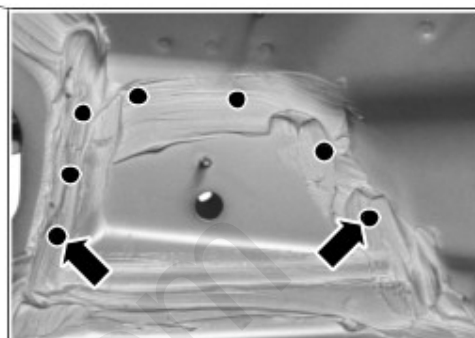
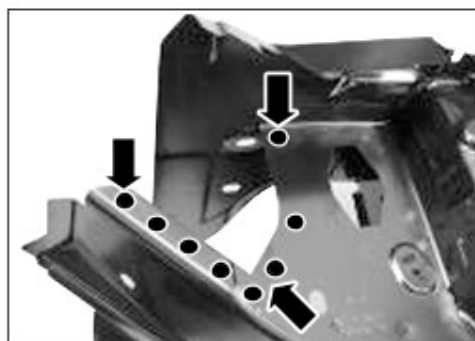
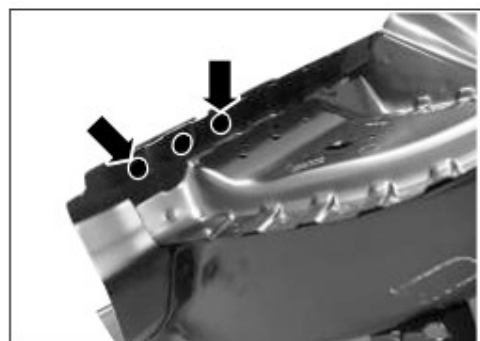


E85505



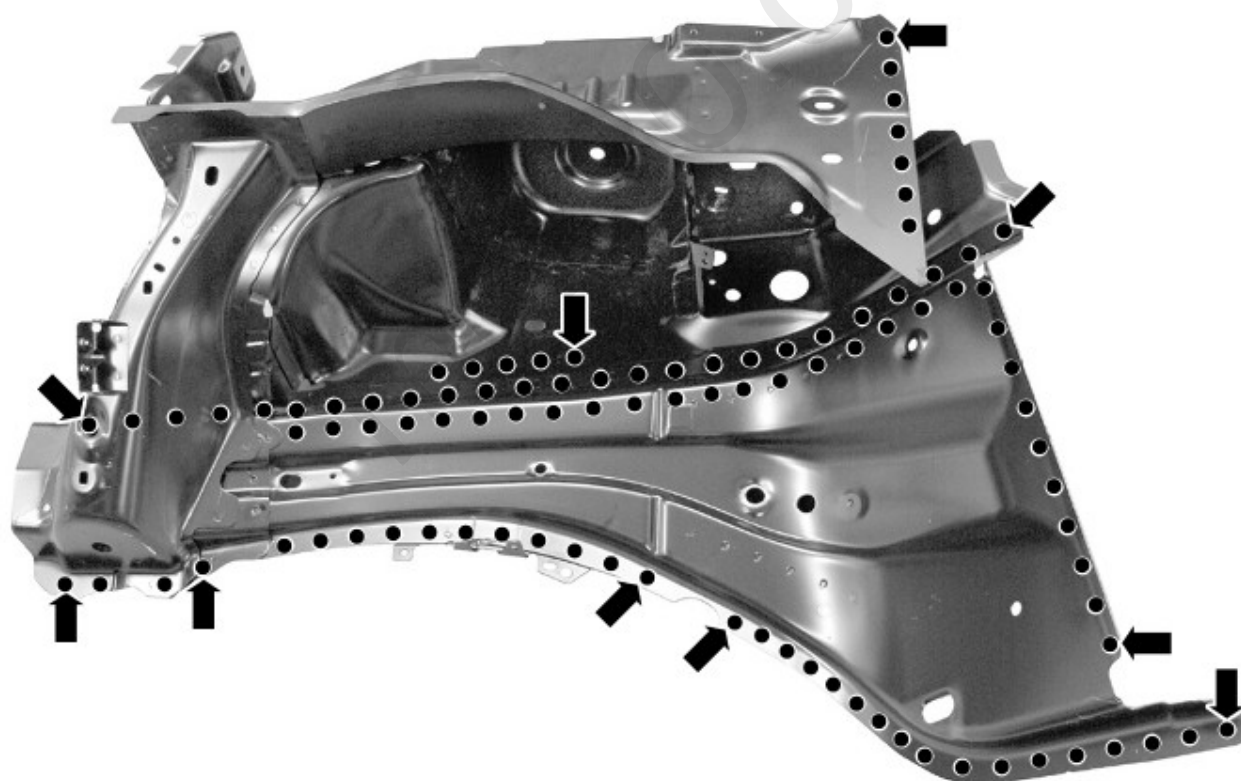
4. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.

5. MIG
Plug
weld.



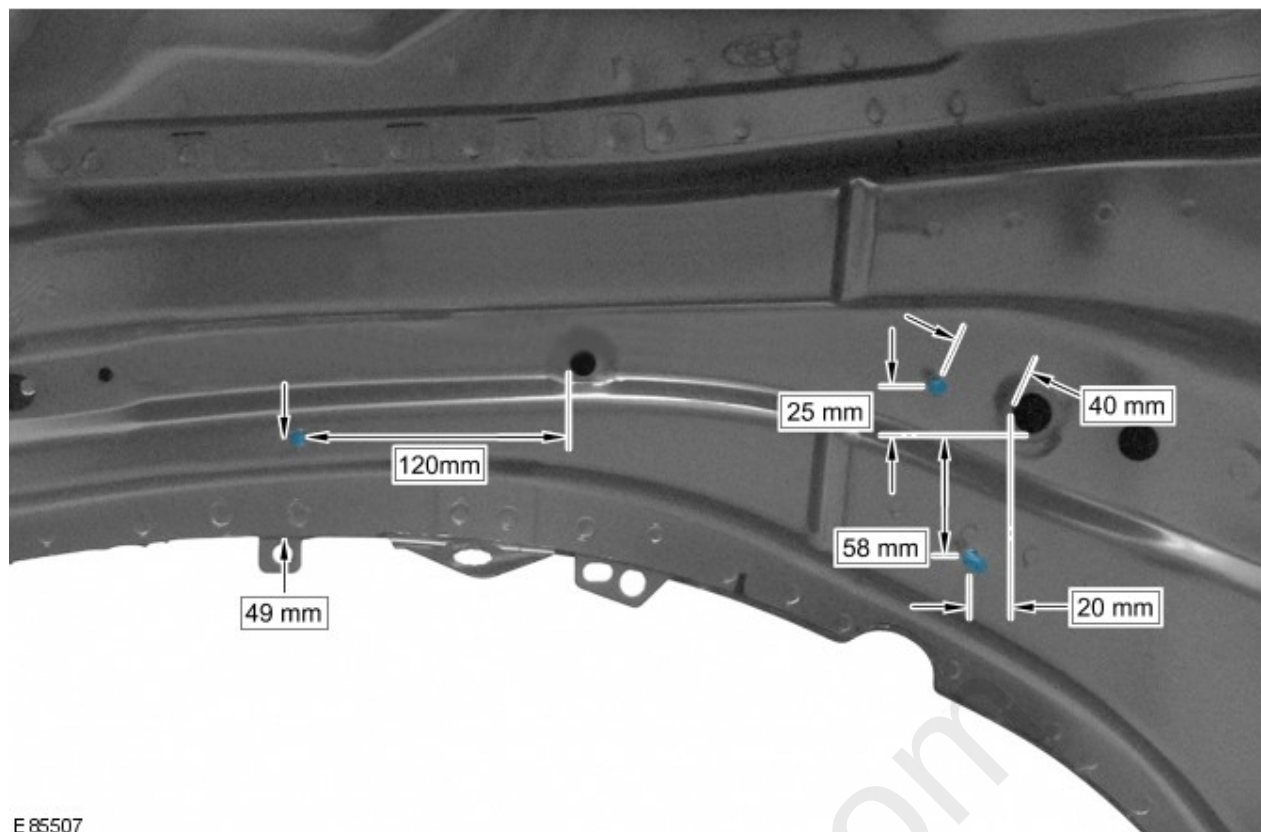
E85506

6. MIG
Plug
weld.



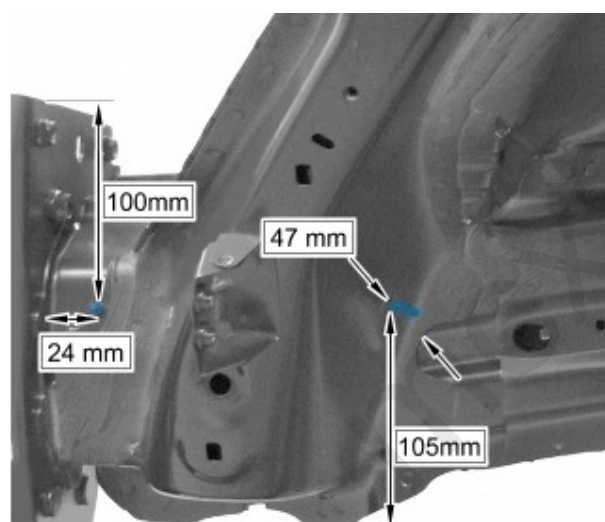
E91975

7. Install weld studs.



E 85507

8. Install weld studs.



E91976

9. Dress all welded joints.

10. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Front Side Member

Removal and Installation

- NOTE: The front side member is serviced as a separate weld on panel. This procedure is to fit a long section cut from the service panel, discarding the rear part.
- NOTE: The service panel is not fully welded.
- NOTE: The section must be made at least 20mm forward of the laser weld.

1. The front side member is replaced in conjunction with:

- Front bumper cover
- Front bumper
- Hood latch panel
- Both front fenders
- Front bumper mounting
- Front side member closing panel
- Fender apron panel front reinforcement
- Fender apron lower panel

- NOTE: It is also necessary to remove the engine and suspension as an assembly.

2. For additional information relating to this repair procedure please see the following:

For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the front side member closing panel.

For additional information, refer to: [Front Side Member Closing Panel](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

4. Remove the radiator cooling pack.

For additional information, refer to: [Radiator](#) (303-03A Engine Cooling - I6 3.2L Petrol, Removal and Installation).

5. Remove the engine and front suspension as an assembly.

6. Release and lay aside the brake pipe.

7. LH Side: Release the battery junction box and position aside.

8. LH Side: Remove the air intake pipe.

9. LH Side: Release and lay aside the brake pipe at the side member.

10. LH Side: Remove the anti-Lock brake system (ABS) Module.

For additional information, refer to: [Anti-Lock Brake System \(ABS\) Module](#) (206-09A Anti-Lock Control, Removal and Installation).

11. RH Side: Remove the windshield washer reservoir.

For additional information, refer to: [Windshield Washer Reservoir](#) (501-16 Wipers and Washers, Removal and Installation).

12. RH Side: Remove the engine mounting bracket.

For additional information, refer to: [Engine Mount RH](#) (303-01B Engine - TD4 2.2L Diesel, Removal and Installation).

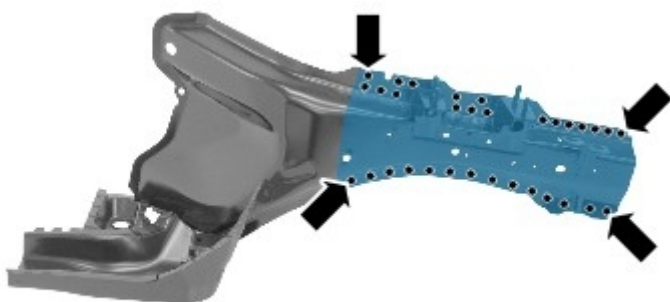
13. RH Side: Remove the fender apron brake pipes.

14. RH Side: Remove the fender apron A/C pipe.

15. Release and lay aside the insulating material at the bulkhead.

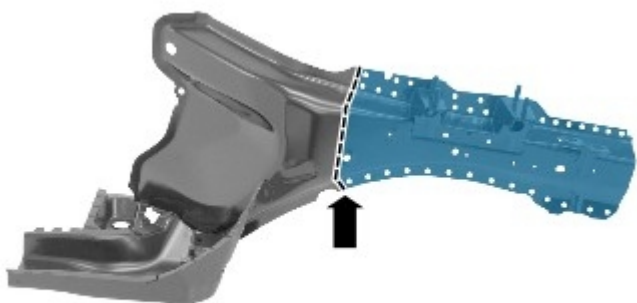
16. Release and lay aside the wiring harness.

17. Mill out the spot welds.



E84785

18. Saw cut the old panel at the point illustrated. The cut should be made at least 20mm forward of the laser weld.

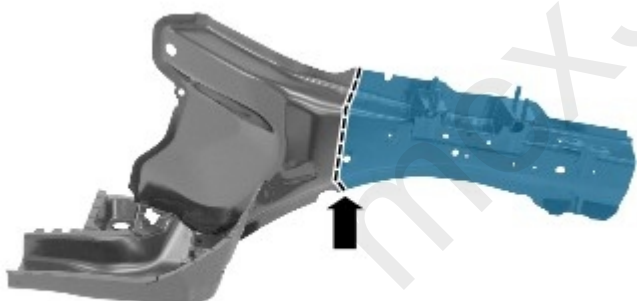


E84786

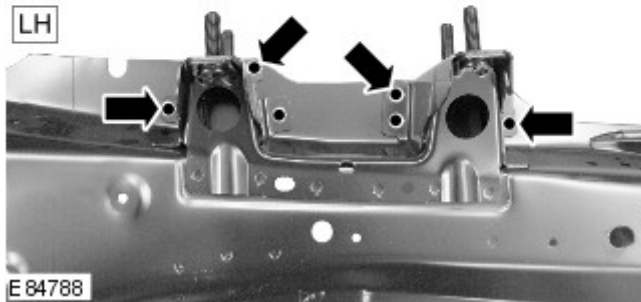
19. Separate the joints and remove the old panel.

Installation

1. Saw cut the new section from the service panel.



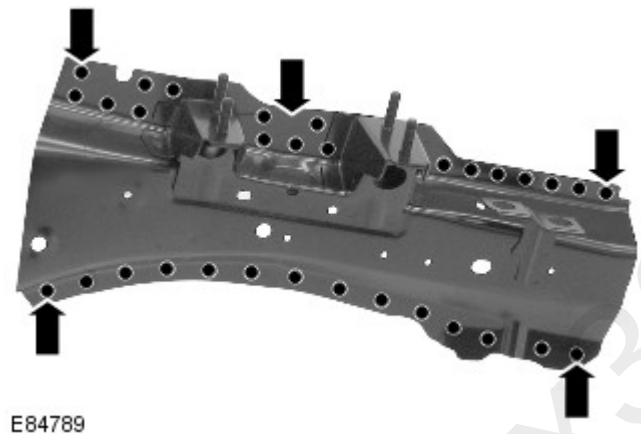
E84787



2. Prepare and MIG plug weld the new panel in the areas illustrated, where it is not fully welded.

3. Prepare the old and new panel joint surfaces.

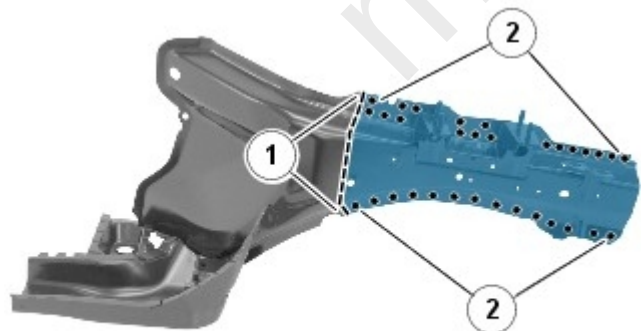
4. Drill holes in the new panel ready for MIG plug welding.



5. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.

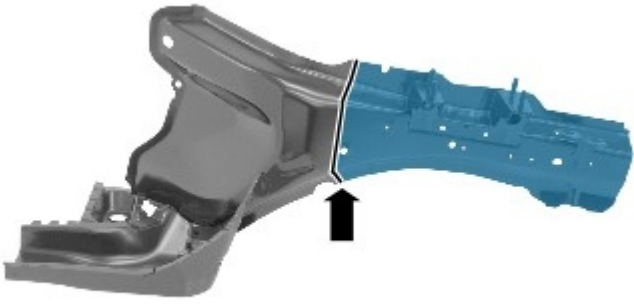
6. With panels clamped into position:

1. Tack weld the butt joint.
2. MIG plug weld.



7. Dress the tack welds.

8. MIG weld the butt joint.



E84791

9. Dress all welded joints.

10. The installation of associated panels and mechanical components is the reverse of removal.

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Front End Sheet Metal Repairs - Suspension Top Mount

Removal and Installation

Removal

- NOTE: The suspension top mount is serviced as a separate weld-on panel.
- NOTE: The service panel is not fully welded.
- NOTE: The panel is serviced less its weld studs

1. The suspension top mount is replaced in conjunction with:

- Front bumper cover
- Front bumper armature
- Hood
- Hood latch panel
- Both front fenders
- Fender apron upper panel
- Fender apron panel
- Instrument panel

- NOTE: It is also necessary to remove the engine and suspension as an assembly.

2. For additional information relating to this repair procedure please see the following:
For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the fender apron panel.
For additional information, refer to: [Fender Apron Panel](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

4. Remove the instrument panel.
For additional information, refer to: [Instrument Panel - TD4 2.2L Diesel](#) (501-12 Instrument Panel and Console, Removal and Installation).

5. Remove the rocker panel inner trim panel.

6. Remove the B-pillar lower trim panel.
For additional information, refer to: [B-Pillar Lower Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

7. Remove the engine and front suspension as an assembly.

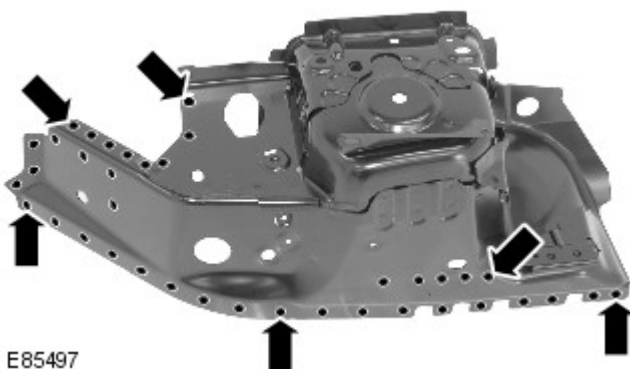
8. RH Side: Remove the pedal box.

9. RH Side: Remove the brake master cylinder.
For additional information, refer to: [Brake Master Cylinder](#) (206-06 Hydraulic Brake Actuation, Removal and Installation).

10. Release and lay aside the carpet and insulating material at the inner bulkhead.

11. Release and lay aside the wiring harness.

12. Mill out the spot welds.

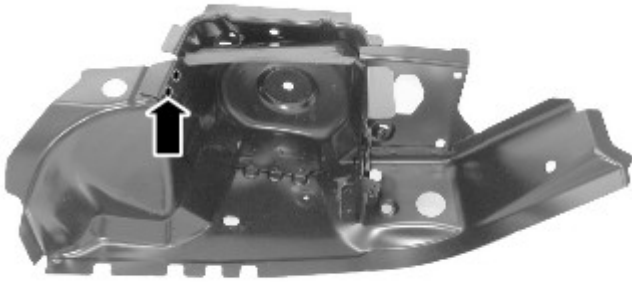


E85497

13. Separate the joints and remove the old panel.

Installation

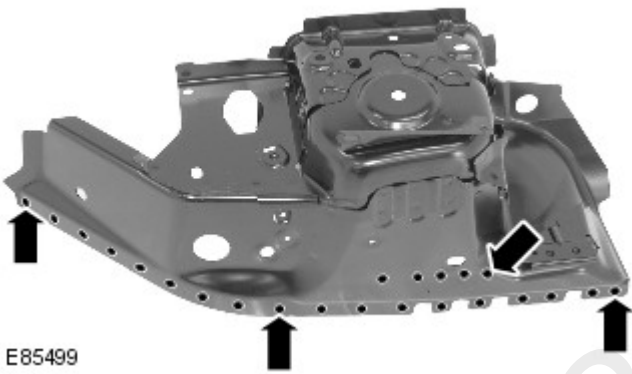
- 1.** Prepare and MIG plug weld the new panel in the area illustrated, where it is not fully welded.



E85498

- 2.** Prepare the old and new panel joint surfaces.

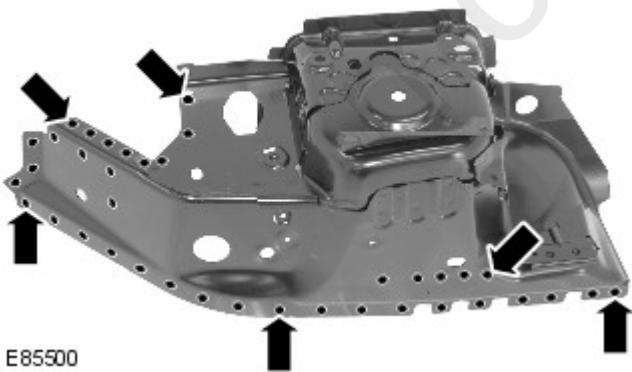
- 3.** Drill holes in the new panel ready for MIG plug welding.



E85499

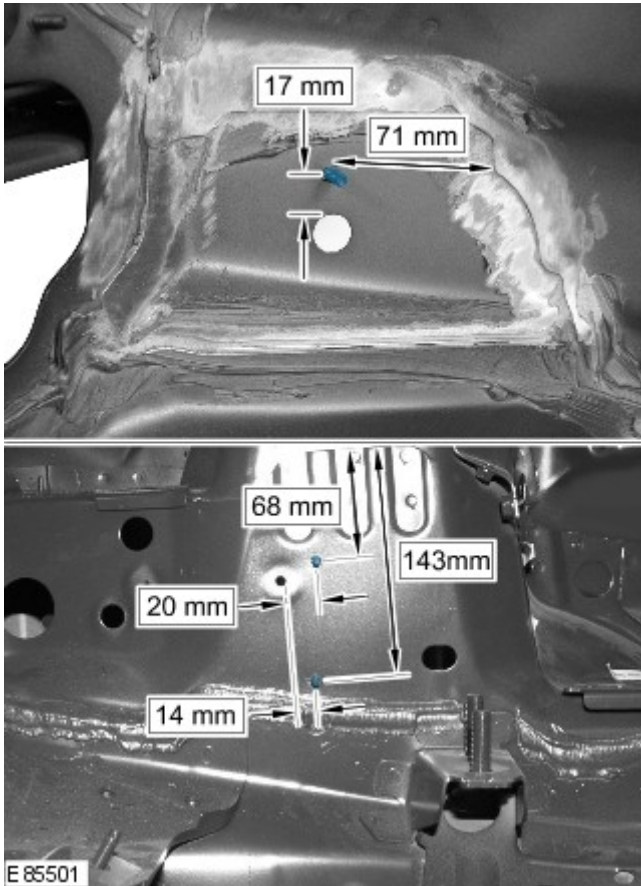
- 4.** Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.

- 5.** MIG Plug weld.



E85500

6. Install weld studs.



7. Dress all welded joints.

8. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Front Side Member Section

Removal and Installation

Removal

- NOTE: The front side member section is cut from the front side member service panel.
- NOTE: The RH section is slightly shorter than the LH due to the location of the engine mounting.
- NOTE: Due to the combined thickness of the panels, it is recommended that spot welds are replaced with MIG plug welds in this repair.

1. The front side member section is replaced in conjunction with:

- Front bumper cover
- Front bumper armature
- Hood latch panel
- Both front fenders
- Front bumper mounting

- NOTE: It is also necessary to remove the engine and suspension as an assembly.

2. For additional information relating to this repair procedure please see the following:
For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the front bumper mounting.
For additional information, refer to: [Front Bumper Mounting](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

4. Remove the radiator cooling pack.
For additional information, refer to: [Radiator](#) (303-03A Engine Cooling - I6 3.2L Petrol, Removal and Installation).

5. Remove the engine and front suspension as an assembly.

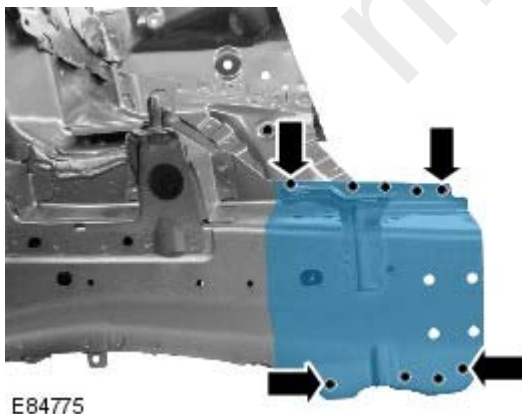
6. LH Side: Remove the air intake pipe.

7. LH Side: Release the battery junction box and position aside.

8. RH Side: Remove the windshield washer reservoir.
For additional information, refer to: [Windshield Washer Reservoir](#) (501-16 Wipers and Washers, Removal and Installation).

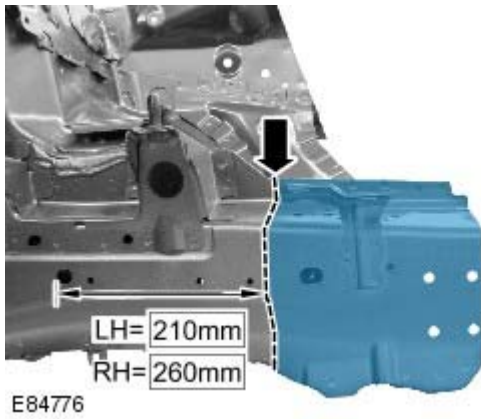
9. Release and lay aside the wiring harness.

10. Mill out the spot welds.



E84775

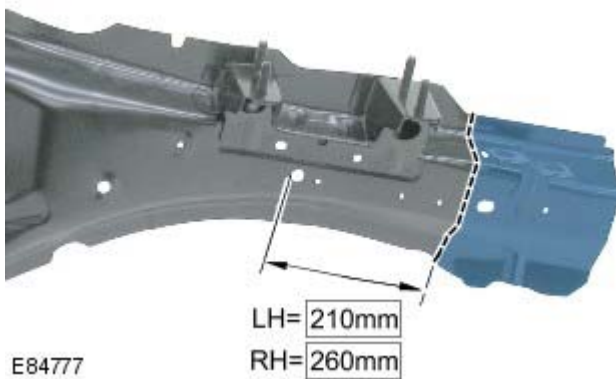
11. Saw cut the old panel at the point illustrated.



12. Separate the joints and remove the old panel.

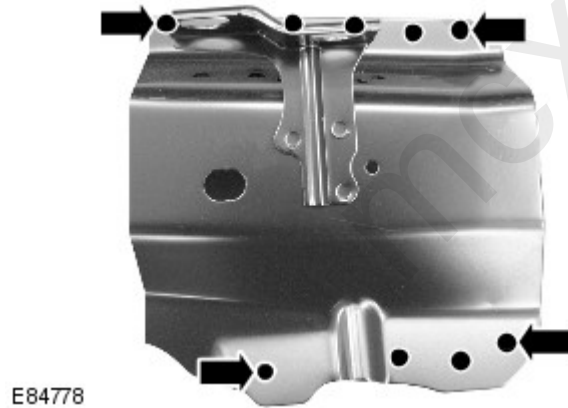
Installation

1. Saw cut the new section from the service panel, ensure the cut is made to align with the cut in the old panel.

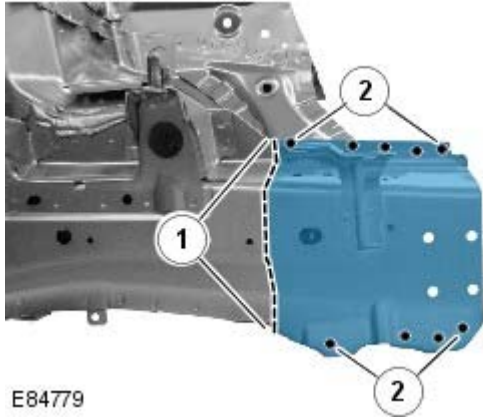


2. Prepare the old and new panel joint surfaces.

3. Drill holes in the new panel ready for MIG plug welding.

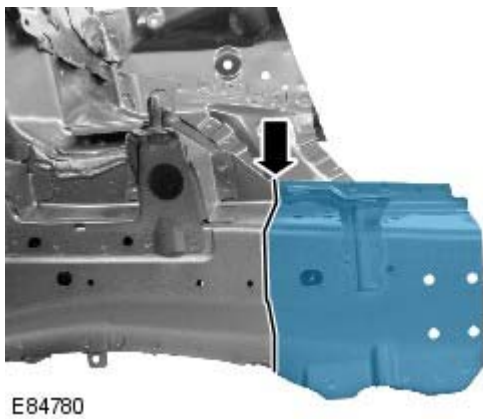


4. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.



5. With panels clamped into position:

1. Tack weld the butt joint.
2. MIG plug weld.



6. Dress the tack welds.

7. MIG weld the butt joint.

8. Dress all welded joints.

9. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Fender Apron Panel

Removal and Installation

Removal

• NOTE: The fender apron panel is serviced as a separate weld-on panel. It is an assembly of the fender apron panel reinforcement, fender apron lower panel and fender apron panel front extension.

• NOTE: The panel is serviced less its weld studs

1. The fender apron panel is replaced in conjunction with:

- Front bumper cover
- Hood latch panel
- Both front fenders
- Fender apron upper panel

2. For additional information relating to this repair procedure please see the following:

For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the fender apron upper panel.

For additional information, refer to: [Fender Apron Upper Panel](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

4. LH Side: Remove the air cleaner.

For additional information, refer to: [Air Cleaner](#) (303-12A Intake Air Distribution and Filtering - I6 3.2L Petrol, Removal and Installation).

5. LH Side: Remove the air intake pipe.

6. LH Side: Remove the battery tray.

For additional information, refer to: [Battery Tray](#) (414-01 Battery, Mounting and Cables, Removal and Installation).

7. LH Side: Remove the engine lower support insulator.

For additional information, refer to: [Engine Lower Support Insulator](#) (303-01A Engine - I6 3.2L Petrol, Removal and Installation).

8. LH Side: Release the battery junction box and position aside.

9. RH Side: Drain the cooling system.

For additional information, refer to: [Cooling System Draining, Filling and Bleeding](#) (303-03A Engine Cooling - I6 3.2L Petrol, General Procedures).

10. RH Side: Evacuate the A/C system.

For additional information, refer to: [Air Conditioning \(A/C\) System Recovery, Evacuation and Charging](#) (412-00 Climate Control System - General Information, General Procedures).

11. RH Side: Remove the power steering reservoir.

For additional information, refer to: [Power Steering Fluid Reservoir](#) (211-02 Power Steering, Removal and Installation).

12. RH Side: Release the coolant expansion tank and position aside.

13. RH Side: Remove the engine mounting bracket.

For additional information, refer to: [Engine Mount RH](#) (303-01A Engine - I6 3.2L Petrol, Removal and Installation).

14. RH Side: Remove the windshield washer reservoir.

For additional information, refer to: [Windshield Washer Reservoir](#) (501-16 Wipers and Washers, Removal and Installation).

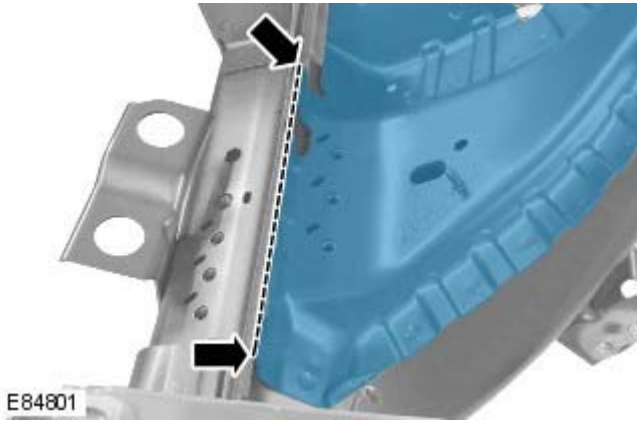
15. RH Side: Remove the fender apron A/C pipes.

16. Remove the shock absorber and spring assembly.

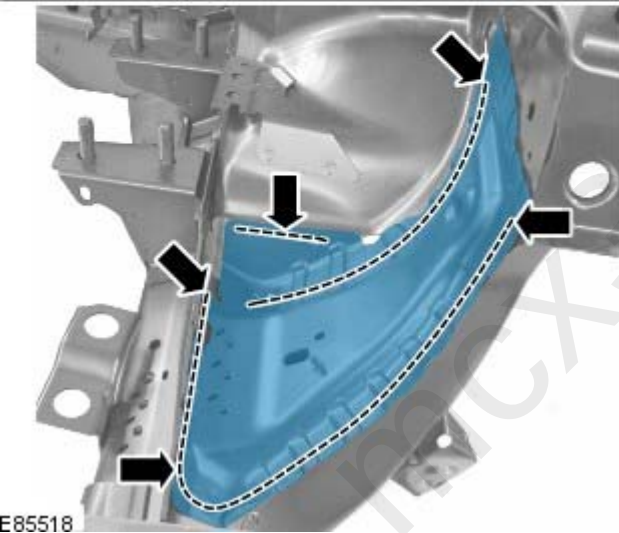
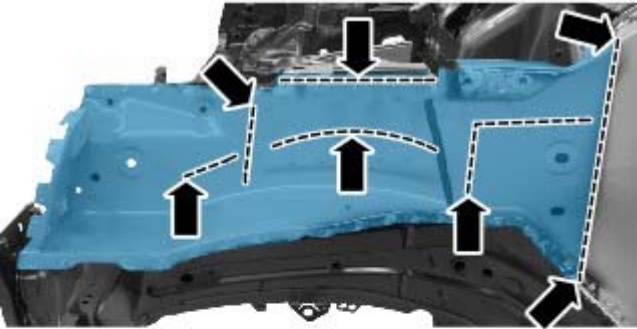
For additional information, refer to: [Shock Absorber and Spring Assembly](#) (204-01 Front Suspension, Removal and Installation).

17. Release and lay aside the wiring harness.

18. Use a belt sander to remove 5 x spot welds.



19. Mill out the remaining spot welds.

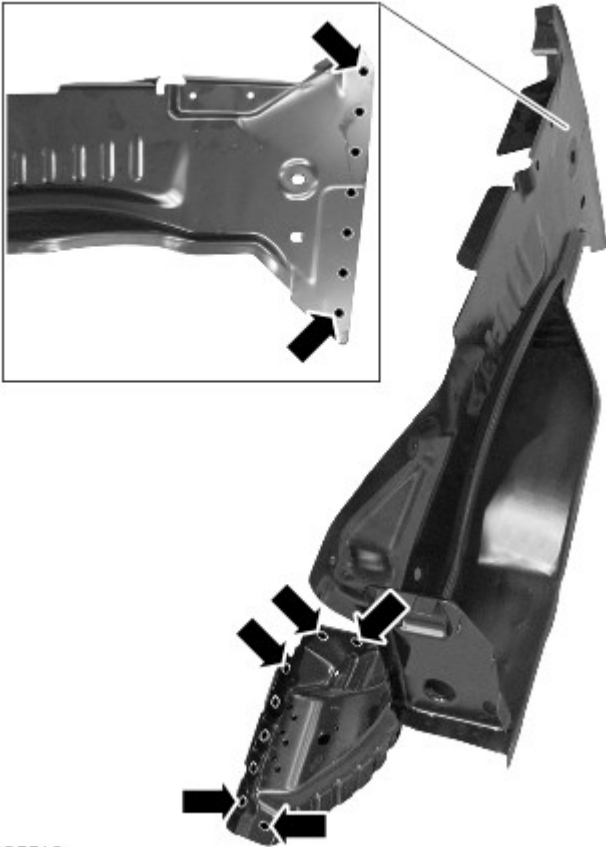


20. Separate the joints and remove the old panel.

Installation

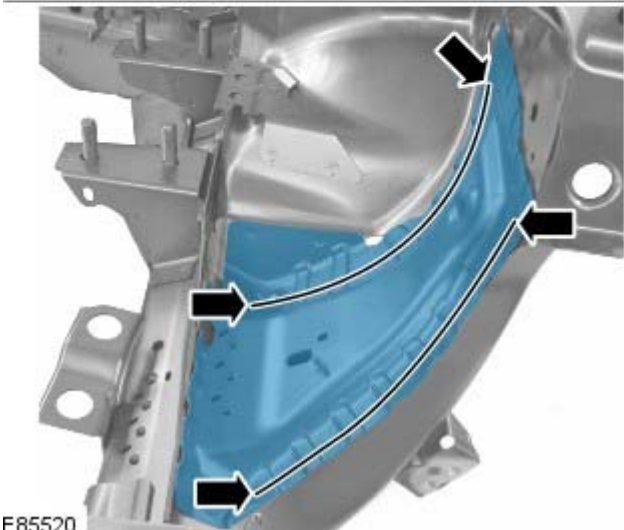
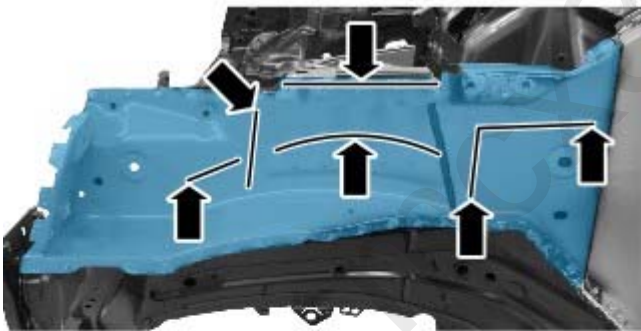
1. Prepare the old and new panel joint surfaces.

2. Drill holes in the new panel ready for MIG plug welding.



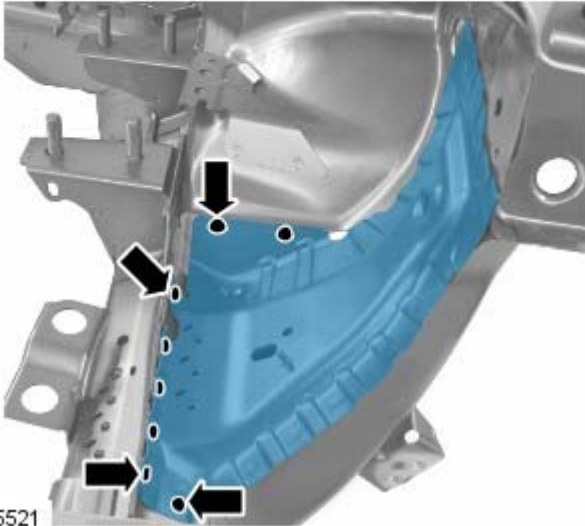
E85519

3. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.
4. Spot weld.



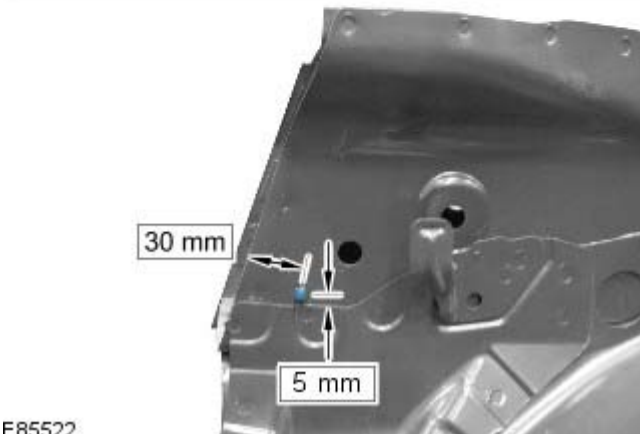
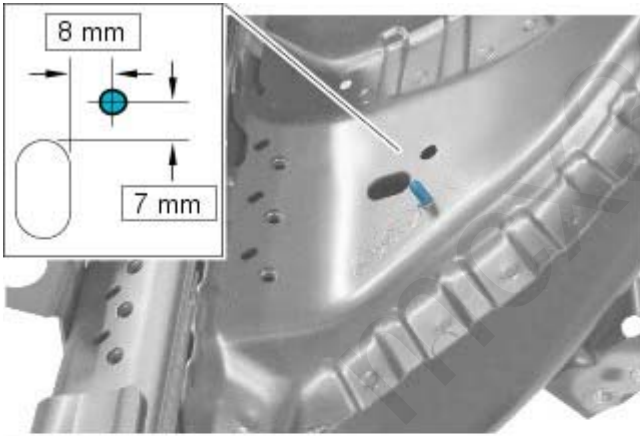
E85520

5. MIG Plug weld.



E85521

6. Install weld studs.



E85522

7. Dress all welded joints.

8. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Fender Apron Panel Reinforcement

Removal and Installation

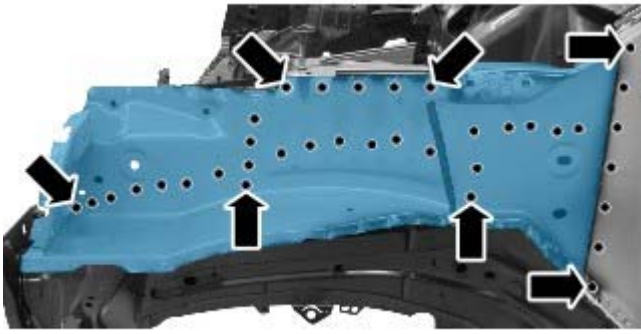
Removal

• NOTE: The fender apron panel reinforcement has to be unpicked from the fender apron panel service panel, it is not available separately.

• NOTE: The RH panel is serviced less its weld studs

1. The fender apron panel reinforcement is replaced in conjunction with:
 - Front bumper cover
 - Hood latch panel
 - Both front fenders
 - Fender apron upper panel
2. For additional information relating to this repair procedure please see the following:
For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).
3. Remove the fender apron upper panel.
For additional information, refer to: [Fender Apron Upper Panel](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).
4. Remove the front shock absorber.
For additional information, refer to: [Front Shock Absorber](#) (204-01 Front Suspension, Removal and Installation).
5. LH Side: Remove the engine support insulator.
For additional information, refer to: [Engine Upper Support Insulator](#) (303-01B Engine - TD4 2.2L Diesel, Removal and Installation).
6. LH Side: Remove the battery tray.
For additional information, refer to: [Battery Tray](#) (414-01 Battery, Mounting and Cables, Removal and Installation).
7. LH Side: Remove the air intake pipe.
8. LH Side: Release the battery junction box and position aside.
9. RH Side: Remove the windshield washer reservoir.
For additional information, refer to: [Windshield Washer Reservoir](#) (501-16 Wipers and Washers, Removal and Installation).
10. RH Side: Remove the engine mounting bracket.
For additional information, refer to: [Engine Mount RH](#) (303-01B Engine - TD4 2.2L Diesel, Removal and Installation).
11. RH Side: Release the coolant expansion tank and lay it aside.
12. RH Side: Evacuate the A/C system.
For additional information, refer to: [Air Conditioning \(A/C\) System Recovery, Evacuation and Charging](#) (412-00 Climate Control System - General Information, General Procedures).
13. RH Side: Remove the fender apron A/C pipes.
14. RH Side: Release and lay aside the insulating material at the bulkhead.
15. Release and lay aside the wiring harness.

16. Mill out the spot welds.



E85488

17. Separate the joints and remove the old panel.

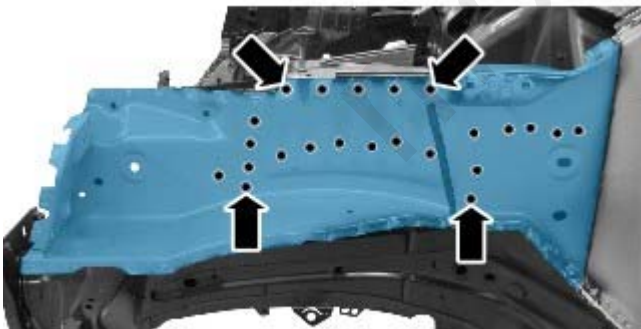
Installation

1. Prepare the old and new panel joint surfaces.
2. Drill holes in the new panel ready for MIG plug welding.



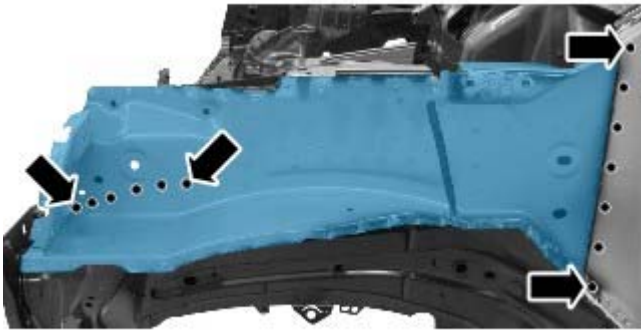
E85489

3. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.
4. Spot weld.



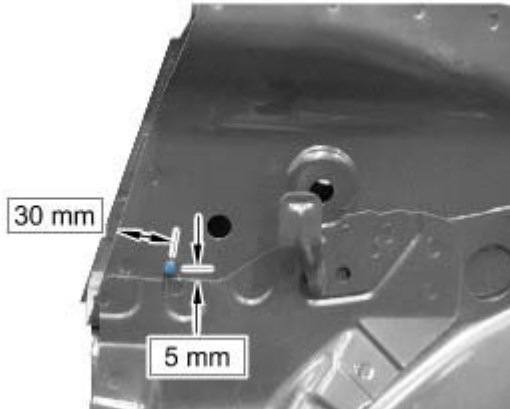
E85559

5. MIG Plug weld.



E85490

6. Install weld studs.



E85492

7. Dress all welded joints.

8. The installation of associated panels and mechanical components is the reverse of removal.

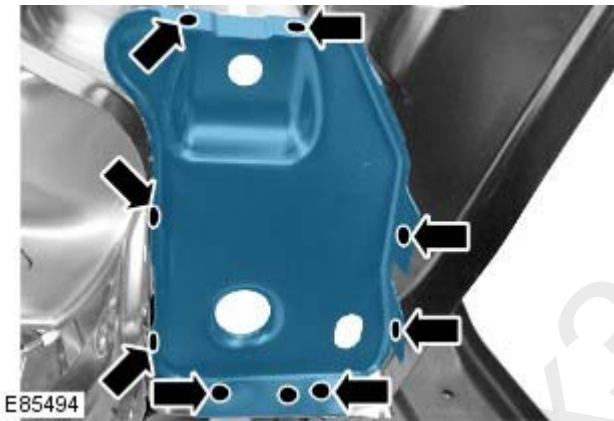
Front End Sheet Metal Repairs - Fender Apron Panel Front Extension

Removal and Installation

Removal

• **NOTE:** The fender apron panel front extension has to be unpicked from the fender apron panel, it is not serviced separately.

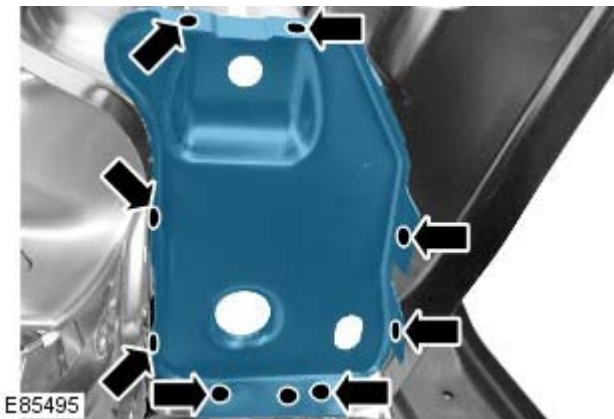
1. The fender apron panel front extension is replaced in conjunction with:
 - Front bumper cover
 - Hood latch panel
 - Both front fenders
2. For additional information relating to this repair procedure please see the following:
 For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).
3. Remove the hood latch panel.
 For additional information, refer to: Hood Latch Panel (501-27, Removal and Installation).
4. Mill out the spot welds.



5. Separate the joints and remove the old panel.

Installation

1. Prepare the old and new panel joint surfaces.
2. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.
3. Spot weld at the points illustrated.



4. Dress all welded joints.
5. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Fender Apron Lower Panel

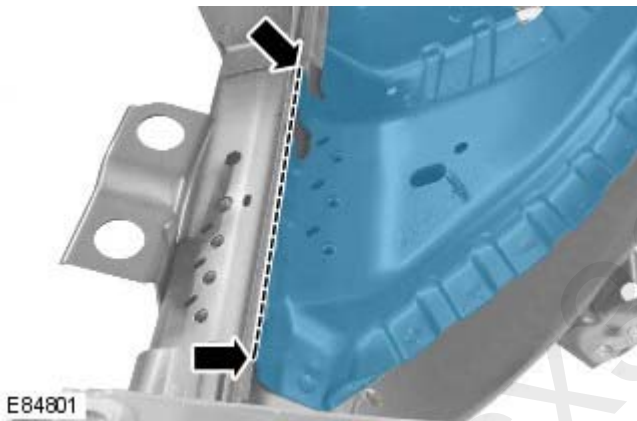
Removal and Installation

Removal

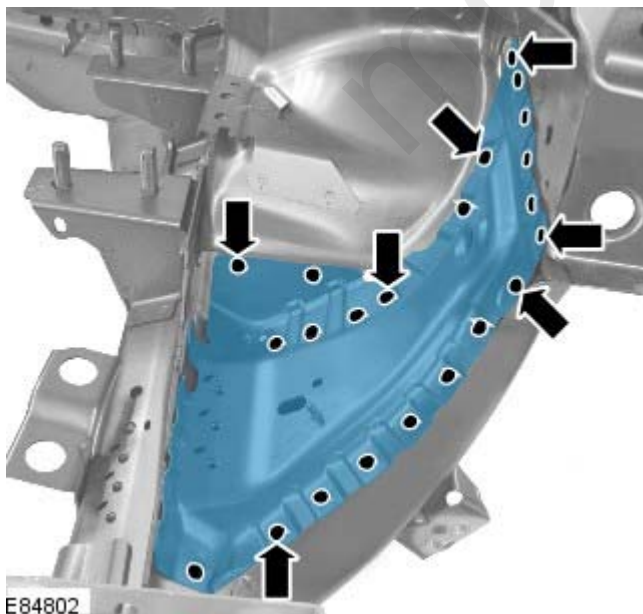
• NOTE: The fender apron lower panel is to be removed from the fender apron panel service panel; it is not available separately.

• NOTE: The panel is serviced less its weld studs

1. The fender apron lower panel is replaced in conjunction with:
 - Front bumper cover
 - Hood latch panel
 - Both front fenders
2. For additional information relating to this repair procedure please see the following:
For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).
3. Remove the hood latch panel.
For additional information, refer to: Hood Latch Panel (501-27, Removal and Installation).
4. Use a belt sander to sand down the spot welds in the area illustrated.



5. Mill out the remaining spot welds.

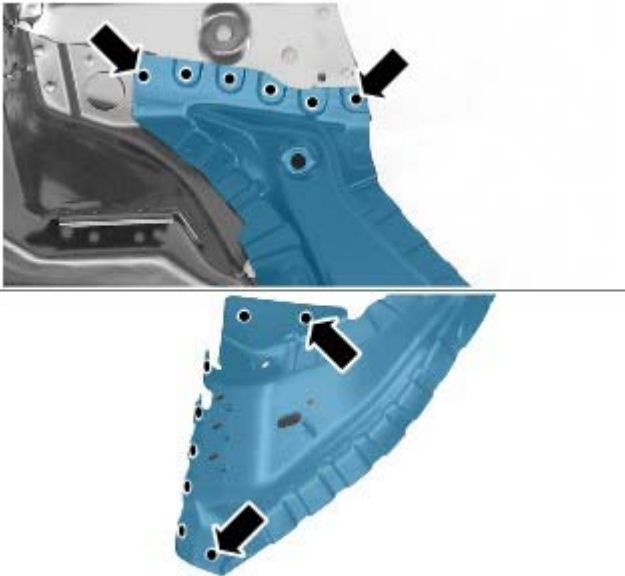


6. Separate the joints and remove the old panel.

Installation

1. Prepare the old and new panel joint surfaces.

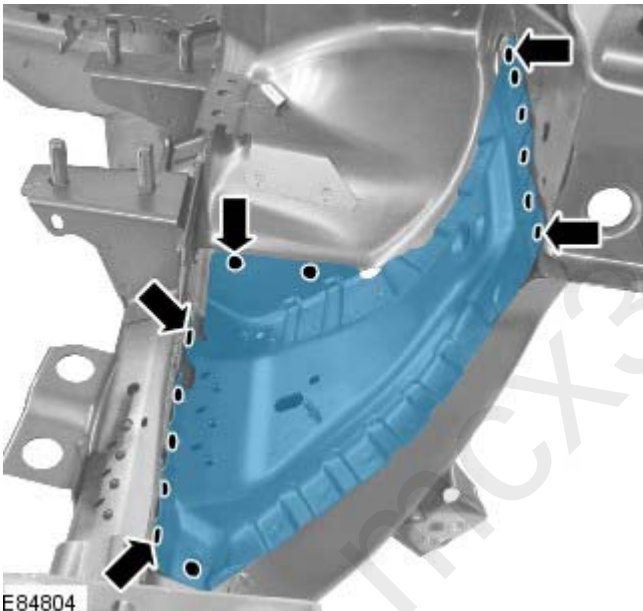
2. Drill holes in the new panel ready for MIG plug welding.



E84803

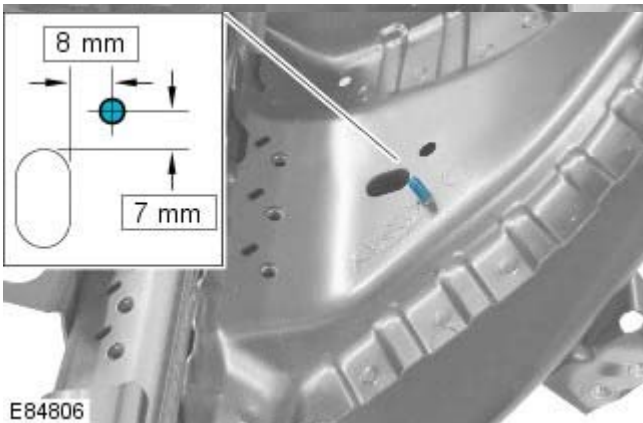
3. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.

4. MIG Plug weld.



E84804

5. Spot weld.



E84806

7. Dress all welded joints.

8. The installation of associated panels and mechanical components is the reverse of removal.



E84805

Front End Sheet Metal Repairs - Fender Apron Upper Panel

Removal and Installation

Removal

- NOTE: The fender apron upper panel is serviced as a separate weld-on panel.
- NOTE: The service panel is not fully welded.
- NOTE: There is an NVH element attached inside this panel, it is not serviced on the new panel. Therefore, if damaged, a new element will be required.

1. The fender apron upper panel is replaced in conjunction with:

- Front bumper cover
- Hood
- Hood latch panel
- Both front fenders

2. For additional information relating to this repair procedure please see the following:

For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the hood latch panel.

For additional information, refer to: Hood Latch Panel (501-27, Removal and Installation).

4. Remove the hood.

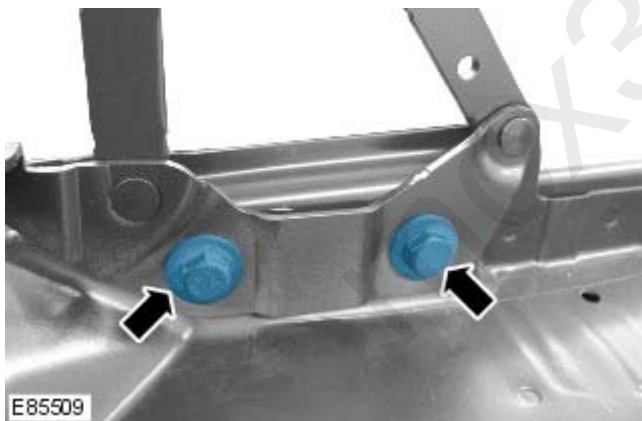
5. Remove the plenum chamber panel.

For additional information, refer to: [Plenum Chamber](#) (412-01 Climate Control, Removal and Installation).

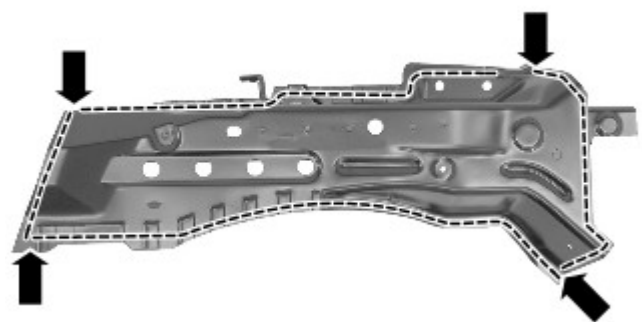
6. LH Side: Remove the air intake pipe.

7. RH Side: Release and lay aside the wiring harness.

8. Remove the hood hinge, 2 x 13mm headed bolts.



9. Mill out the spot welds.

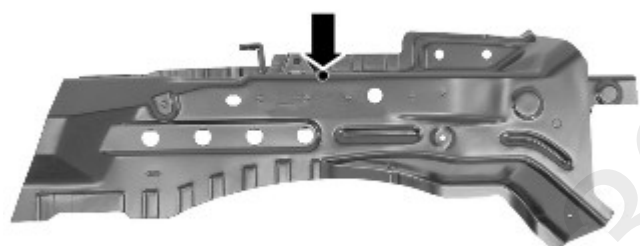




10. Separate the joints and remove the old panel, including its NVH element.

Installation

1. Prepare and spot weld the new panel in the areas illustrated, where it is not fully welded.



E85512

2. Prepare the old and new panel joint surfaces.

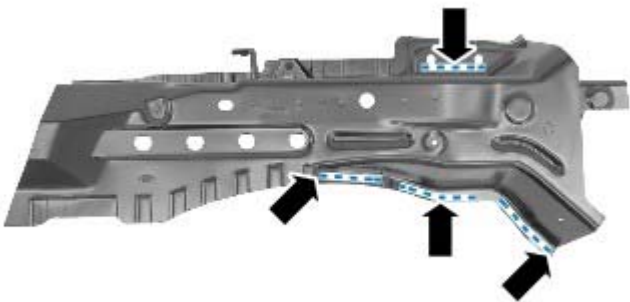
3. Drill holes in the new panel ready for MIG plug welding.



E85513

4. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.

5. Remove the panel and apply adhesive to the areas illustrated.



E85514

6. If necessary, renew the NVH element.

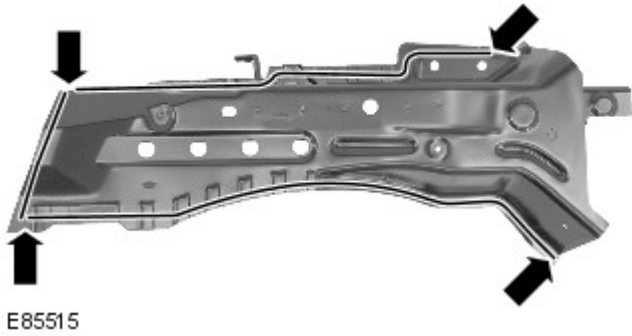
7. Apply sealer adhesive to the NVH element.



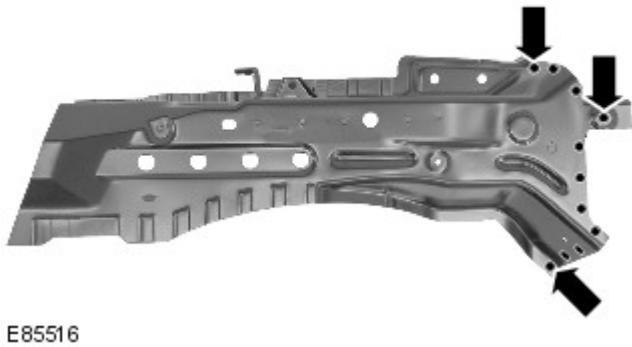
E85511

8. Offer up the new panel and clamp into position.

9. Spot weld at the points illustrated.



10. MIG Plug weld.



11. Dress all welded joints.

12. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Front Side Member Closing Panel

Removal and Installation

Removal

• NOTE: The front side member closing panel must be unpicked from the front side member and suspension top mount assembly, it is not serviced separately.

• NOTE: The panel is serviced less its weld studs

1. The front side member closing panel is replaced in conjunction with:

- Front bumper cover
- Front bumper
- Hood latch panel
- Both front fenders
- Front bumper mounting
- Fender apron lower panel
- Fender apron panel front reinforcement
- Front side member

• NOTE: It is also necessary to remove the engine and suspension as an assembly.

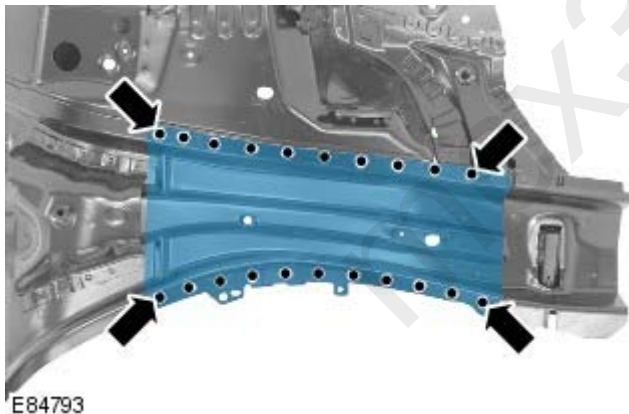
2. For additional information relating to this repair procedure please see the following:

For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the front side member.

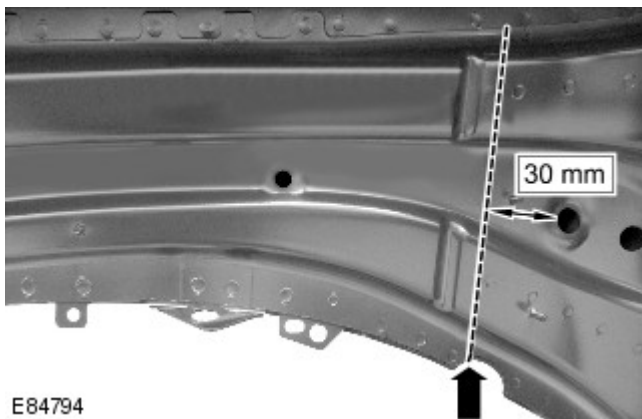
For additional information, refer to: [Front Side Member](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

4. Mill out the spot welds.



E84793

5. Saw cut the old panel at the point illustrated.



E84794

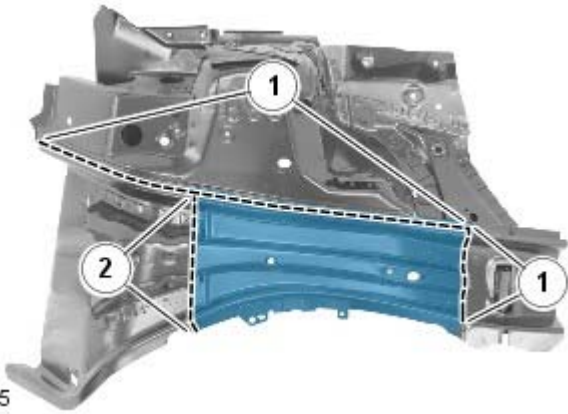
6. Separate the joints and remove the old panel.

Installation

1. Remove the panel from the service panel.

1. Mill out the spot welds.

2. Saw cut, ensuring the cut aligns with the one already made on the vehicle.



2. Prepare the old and new panel joint surfaces.

3. Drill holes in the new panel ready for MIG plug welding.

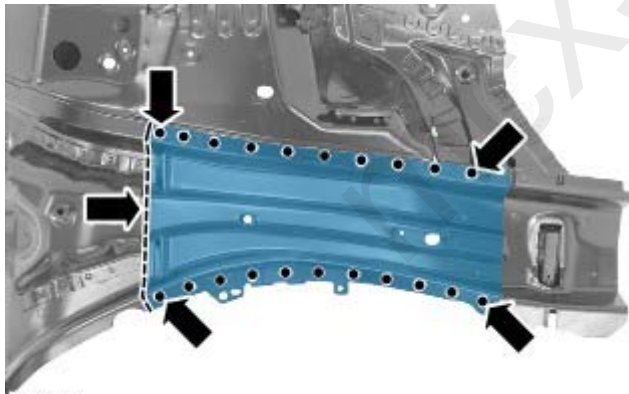


4. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step, if not, rectify and recheck before proceeding.

5. With panels clamped into position:

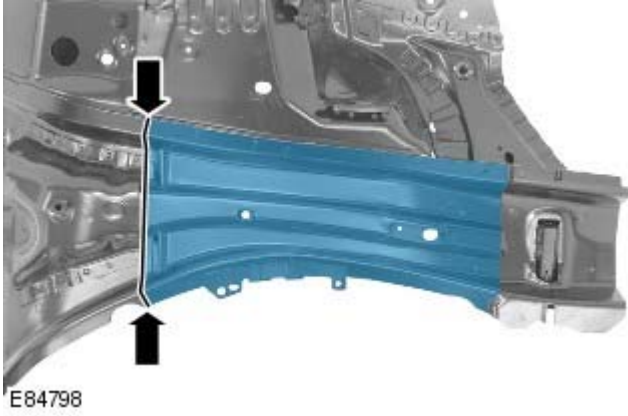
1. Tack weld the butt joint.

2. MIG plug weld.

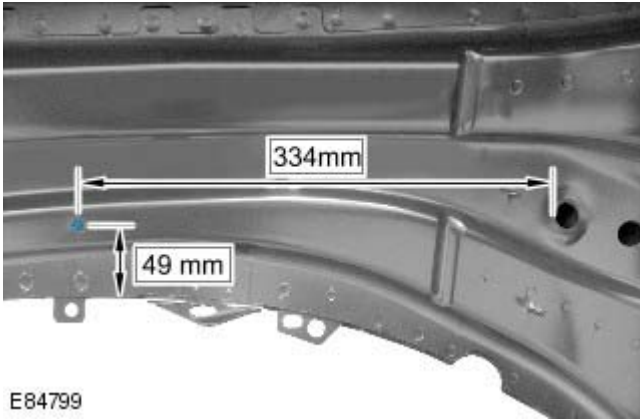


6. Dress the tack welds.

7. MIG weld the butt joint.



8. Install weld stud.



9. Dress all welded joints.

10. The installation of associated panels and mechanical components is the reverse of removal.

Front End Sheet Metal Repairs - Fender Apron Panel Front Reinforcement

Removal and Installation

Removal

• NOTE: The fender apron panel front reinforcement has to be removed from the fender apron panel service panel; it is not available as a separate panel.

• NOTE: The panel is serviced less its weld studs

1. The front side member and fender apron panel is replaced in conjunction with:

- Front bumper cover
- Front bumper
- Hood
- Hood latch panel
- Both front fenders
- Fender apron lower panel

2. For additional information relating to this repair procedure please see the following:

For additional information, refer to: [Body and Frame](#) (501-26 Body Repairs - Vehicle Specific Information and Tolerance Checks, Description and Operation) / [Standard Workshop Practices](#) (100-00 General Information, Description and Operation).

3. Remove the fender apron lower panel.

For additional information, refer to: [Fender Apron Lower Panel](#) (501-27 Front End Sheet Metal Repairs, Removal and Installation).

4. Mill out the spot welds.



E84807

5. Separate the joints and remove the old panel.

Installation

1. Prepare the old and new panel joint surfaces.

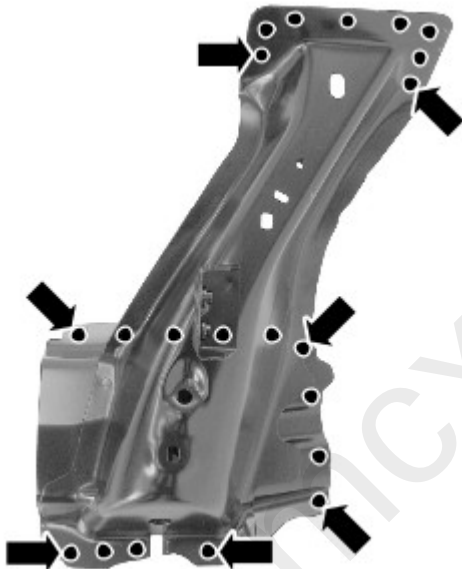
2. Drill holes in the new panel ready for MIG plug welding.



E84807

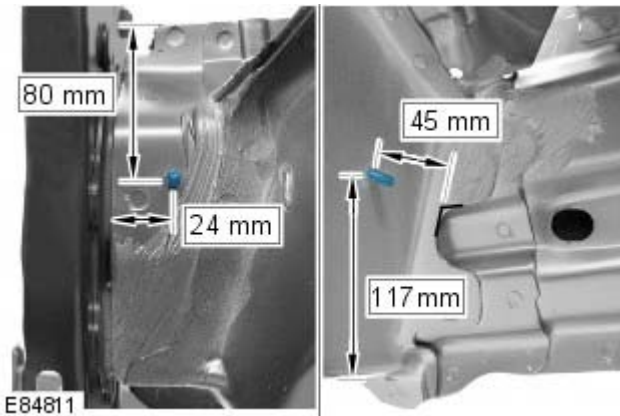
3. Offer up the new panel and clamp into position. Check alignment, if correct, proceed to next step. If not, rectify and recheck before proceeding.

4. MIG Plug weld.



E84807

5. Install weld studs.



E84811

6. Dress all welded joints.

7. The installation of associated panels and mechanical components is the reverse of removal.